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EXAMINER

CLARK, ISAAC R

ART UNIT	PAPER NUMBER
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2154

DATE MAILED: 07/14/2004

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/811,161

Applicant(s)

STRAHM ET AL.

Examiner

Isaac R Clark

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7.8, and 9.</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-30 are presented for examination

Priority

2. No claim for priority has been made in this application.
3. The effective filing date for the subject matter defined in the pending claims in this application is 03/16/2001.

Drawings

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:
 - i. Figure 6; reference characters 672, 674, 676, 682, 684, 686, and 690.
 - ii. Figure 7; reference characters 717, 720, 722, 724, 726, 727, and 746.
5. Corrected drawing sheets, or amendment to the specification to add the reference character(s) in the description, are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the

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applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "762" has been used to designate both the "Outgoing Overflow Buffer" and the "Mobility Ack". Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

7. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested:

"Method and apparatus for managing concurrent network communication connections".

Claim Objections

8. Claims 12-18 are objected to because of the following informalities:

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iii. As per claim 12, the phrase "of as an active connection" is not grammatically correct. It is recommended that the word "of" be deleted from the claim.

iv. As per claim 14, the phrase "each of at least some of" is unclear and self-contradictory. It is recommended to replace the phrase with "one or more of".

Appropriate correction is required.

9. Claims 13 and 15-18 are objected to because of their dependencies on claim 12.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 5 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

12. As per claim 5, claim 5 recites the limitation "two or more of the connections" in lines 1 and 2 of the claim. There is insufficient antecedent basis for this limitation in the claim because only two connections are described in claim 1 on which claim 5 depends. For the purposes of examining the subject matter of claim 5, it is assumed it is intended that one or more additional connections may be optionally opened.

13. As per claim 11, claim 11 recites the limitation "the device" in line 4 of the claim. There is insufficient antecedent basis for this limitation in the claim because claim 1 on which claim 11 depends recites "at a device" line 2 and again in line 5 and it cannot be

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determined which of the two devices of claim 1 claim 11 refers to. For the purpose of examining the subject matter of claims 1 and 11, it is assumed that a single device is intended in claim 1.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

15. Claims 1-4, 6, 7, 12, 13, 19, 20, 23-25, and 28-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Jawanda (US 6,243,581).

16. As per claim 1, Jawanda teaches a method comprising:

at a device 14, opening a first connection to a server 24 (Fig. 1; col. 4, lines 31-38; block 102, Fig. 4);

establishing an information exchange protocol for communicating on the first connection (col. 2, lines 55-59);

at a device 14, opening a second connection to the server 24 (Fig 1; col. 5, lines 24-30; block 120, Fig. 4);

selecting an active connection from connections including the second connection (col. 5, lines 43-52); and

communicating information configured for the information exchange protocol using the active connection (col. 5 lines 65-66 and col. 6, lines 1-9; Fig 4, block 132).

17. As per claim 2, Jawanda teaches the method of claim 1 further comprising communicating information configured for the information exchange protocol using the first connection as the active connection prior to selecting the second connection as the active connection (col. 4, lines 35-39; first connection established at power up of terminal; Fig. 4 showing communication in block 104 occurring prior to establishing second connection in block 106).

18. As per claim 3, Jawanda teaches the method of claim 1 in which the second connection is opened prior to establishing the information exchange protocol (col. 4 lines 61-63; determination to open second connection made any time after block 102).

19. As per claim 4, Jawanda teaches the method of claim 1 in which a single one of the connections is selected as the active connection (col. 2, lines 1-9).

20. As per claim 6, Jawanda teaches the method of claim 1 in which the second connection includes a wireless connection 20 (Fig 1; col. 2 lines 48-56).

21. As per claim 7, Jawanda teaches the method of claim 1 or claim 6 further comprising monitoring the connections for a parameter selected from the group consisting of signal strength, transmittal rate, latency, cost of transmittal, and connection integrity (col. 4, lines 61-64 based on transmittal rate; col. 5, lines 48-55 based on signal strength or connection integrity); and

reselecting the active connection to optimize the parameter (col. 5, line; 34-38 and lines 43-55).

22. As per claim 12, Jawanda teaches a method comprising:

at a server 24, accepting connections from a device for communicating information configured by an information exchange protocol (Fig. 1, col. 4 lines 31-38 and lines 44-47);

detecting or selecting one or more of the connections of as an active connection (col. 5, lines 43-52); and

communicating information configured by the information exchange protocol using the active connection (col. 5 lines 65-66 and col. 6, lines 1-9; Fig 4, block 132).

23. As per claim 13, Jawanda teaches the method of claim 12 in which a single one of the connections is selected as the active connection (Fig. 4; block 132; transfer of datagrams via WWAN while optionally maintaining WLAN connection).

24. As per claim 19, Jawanda teaches an apparatus comprising a processor and software (col. 3, lines 29-32) configured to cause the processor to:

open a first connection to a server (Fig. 1; col. 2 lines 28-31; col. 6 lines 30-34);

establish an information exchange protocol (col. 2, lines 55-59);

open a second connection to a server (Fig 1; col. 5, lines 24-30; block 120, Fig. 4);

select an active connection from connections including the second connection (col. 5, lines 43-52); and

communicate information configured for the information exchange protocol using the active connection (col. 5 lines 65-66 and col. 6, lines 1-9; Fig 4, block 132).

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25. As per claim 20, Jawanda teaches the apparatus of claim 19 in which the processor is further configured to

monitor the connections for a parameter selected from the group consisting of signal strength, transmittal rate, latency, cost of transmittal, and connection integrity (col. 5, lines 48-55 selection based on signal strength or connection integrity); and

reselect the active connection to optimize the parameter (col. 4, lines 61-64 selection based on transmittal rate; (col. 5, line; 34-38 and lines 43-55).

26. As per claim 23, claim 23 is a product claim containing the same subject matter as the method claim 1. Claim 23 is rejected on the same basis as claim 1.

27. As per claim 24, claim 24 is a product claim containing the same subject matter as the method in claim 4. Claim 24 is rejected on the same basis as claim 4.

28. As per claim 25, claim 25 is rejected for the same reason as claim 7.

29. As per claim 28 Jawanda teaches a system comprising:

a device 14, a server 24, and communication links (Fig. 1), in which the device is configured to:

open a first connection to the server using one of the communication links (Fig. 1; col. 2 lines 28-31; col. 6 lines 30-34);

establish an information exchange protocol (col. 2, lines 55-59);

open a second connection to the server using another of the communication links (Fig 1; col. 5, lines 24-30; block 120, Fig. 4);

select an active connection from connections including the second connection (col. 5, lines 43-52); and

communicate information configured for the information exchange protocol using the active connection (col. 5 lines 65-66 and col. 6, lines 1-9; Fig 4, block 132).

30. As per claim 29, Jawanda teaches the system of claim 28 in which at least one of the communication links includes a wireless communication link (Fig 1; col. 2 lines 48-56).

31. As per claim 30, Jawanda teaches the system of claim 28 or claim 29 in which the device is further configured to:

monitor the connections for a parameter selected from the group consisting of signal strength, transmittal rate, latency, cost of transmittal, and connection integrity (col. 4, lines 61-64 selection based on transmittal rate; col. 5, lines 48-55 selection based on signal strength or connection integrity); and

reselect the active connection to optimize the parameter (col. 5, line; 34-38 and lines 43-55).

Claim Rejections - 35 USC § 103

32. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

33. Claims 5, 9, 15, 16, 22, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jawanda (US 6,243,581) in view of Westfield (US 6,470,390).

34. As per claim 5, Jawanda fails to teach the method of claim 1 in which two or more open connections are selected as the active connection.

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35. Westfield teaches the method of claim 1 in which two or more open connections are selected as the active connection (col. 3 lines 65-67; col. 4 lines 10-20). It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Jawanda and Watson because they both deal with network communications over a plurality of connections between a client and a server.

Furthermore, the teaching of Westfield to allow multiple simultaneous active actions allows increased throughput of data and commands between the client and server (Westfield col.4, lines 57-67 and col. 5 lines 1-3).

36. As per claim 9, Jawanda fails to explicitly teach the method of claim 1, 4, or 6 in which the information includes a command that is effected by a module on the server.

37. Westfield teaches teach the method of claims 1, 4, or 6 in which the information includes a command that is effected by a module on the server (col. 7, lines 28-34). It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Jawanda and Watson because they both deal with network communications over a plurality of connections between a client and a server. Furthermore, the teaching of Westfield in which the information includes a command that is effected by a module on the server would allow the client to initiate activity on a remote server.

38. As per claim 15, Jawanda fails to teach the method of claim 12 in which the information includes a command for a module. Westfield teaches teach the method of claim 12 in which the information includes a command for a module (col. 7, lines 28-34). It would have been obvious to one of ordinary skill in this art at the time the invention

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was made to combine the teaching of Jawanda and Watson because they both deal with network communications over a plurality of connections between a client and a server. Furthermore, the teaching of Westfield in which the information includes a command that is effected by a module on the server would allow the client to initiate activity on a remote server.

39. As per claim 16, Jawanda in view of Westfield as applied in claim 15 teaches the method of claim 15 further comprising effecting the command (col. 7, lines 28-34).

40. As per claim 22, Jawanda fails to teach the apparatus of claim 19 in which the information includes commands that are effected by a module on the server.

41. Westfield teaches the apparatus of claim 19 in which the information includes commands that are effected by a module on the server. The rationale for combining Jawanda and Westfield is as described above for claim 9.

42. As per claim 27, claim 27 is a product claim having the same subject matter as the method in claim 9. Claim 27 is rejected on the same basis as claim 9.

43. Claims 8, 10, 14, 21, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jawanda (US 6,243,581) in view of Bernet et al. (hereinafter Bernet) US 2004/022191.

44. As per claim 8, Jawanda fails to teach the method of claim 1 in which the information is communicated in packets that include aggregated information for more than one application.

45. Bernet teaches teach the method of claim 1 in which the information is communicated in packets that include aggregated information for more than one

application (Paragraph 0013). It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Jawanda and Bernet because they both deal with network communications between applications on a client and a server. Furthermore, the teaching of Bernet to aggregate packets from more than one application would allow more fully utilizing the bandwidth capability of a connection while conserving the resources necessary to open additional connections.

46. As per claim 26, claim 26 is a product claim having the same subject matter as the method in claim 8. Claim 26 is rejected on the same basis as claim 8.

47. As per claim 10, Jawanda in view of Bernet as applied in claim 8 teaches the method of claim 1 in which the information comprises an aggregation of information from applications, but fails to teach that the extent of aggregation for each application being dependent on an indicator of priority for information exchange associated with each application.

48. Bernet teaches an aggregation of information from applications, the extent of aggregation for each application being dependent on an indicator of priority for information exchange associated with each application (Paragraph 0045; application identifier used to identify application type and establish priority; Paragraph 0047 policy server prioritizes request relative to others). It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Jawanda and Bernet because they both deal with network communications between applications on a client and a server. Furthermore, the teaching of Bernet to make the extent of aggregation for each application be dependent on an indicator of priority for

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information exchange associated with each application would make allocate finite bandwidth resources based on the importance of the specific traffic involved.

49. As per claim 14, Jawanda fails to teach the method of claim 12 in which the information is communicated in packets, each of at least some of the packets includes aggregated information for different applications on the device.

50. Bernet teaches teach the method of claim 14 in which the information is communicated in packets that includes aggregated information for different applications on the device (Paragraph 0013). It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Jawanda and Bernet because they both deal with network communications between applications on a client and a server. Furthermore, the teaching of Bernet to aggregate packets from more than one application would allow more fully utilizing the bandwidth capability of a connection while conserving the resources necessary to open an additional connection.

51. As per claim 21, Jawanda fails to teach the apparatus of claim 19 in which the information is communicated in packets, each of at least some of the packets includes aggregated information for different local applications.

52. Bernet teaches the apparatus of claim 19 in which the information is communicated in packets, each of at least some of the packets includes aggregated information for different local applications. The rationale for combining Jawanda and Bernet is as described for claim 14 above.

53. Claims 11 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jawanda in view of Westfield as applied to claim 9 above, and further in view of Tso (US 2002/0062384).

54. As per claim 11, Jawanda in view of Westfield as applied to claim 9 fails to teach the method of claim 9 in which the command causes the server to contact a remote system, receive a reply from the remote system, and effect a response without transmitting the reply to the device.

55. Tso teaches method of claim 9 in which the command (URL requests) causes the server 20 (Fig. 2; Paragraph 0024) to contact a remote system 35 (Fig. 2), receive a reply from the remote system, and effect a response without transmitting the reply to the device (Paragraph 0024; fetching embedded URLs and storing them in the proxy server cache until requested by client). It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Jawanda and Tso because they both deal with network communications between a client and server. Furthermore, the teaching of Tso to contact a remote system, receive a reply from the remote system, and effect a response without transmitting the reply to the device would result in a more rapid response to future requests by caching material that it is anticipated will be requested in the immediate future.

56. As per claim 17, Jawanda in view of Westfield as applied to claim 16 fails to teach the method of claim 16 in which the module effects the command by contacting a remote server, receiving a reply from the remote server and effecting a response without transmitting the reply to the device.

57. Tso teaches method of claim 16 in which module effects the command (URL requests) by contacting a remote system 35 (Fig. 2), receiving a reply from the remote system, and effect a response without transmitting the reply to the device (Paragraph 0024; fetching embedded URLs and storing them in the proxy server cache until requested by client). It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Jawanda and Tso because they both deal with network communications between a client and server. Furthermore, the teaching of Tso to contact a remote system, receive a reply from the remote system, and effect a response without transmitting the reply to the device would result in a more rapid response to future requests by caching material that it is anticipated will be requested in the immediate future.

58. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jawanda as applied to claim 12 above in view of Bernet, further in view of Westfield and further in view of Tso.

59. Jawanda as applied in claim 12 fails to teach the method of claim 12, 13, or 17 in which the information is an aggregation of information for applications, the extent of aggregation for each application being dependent on an indicator of priority for information exchange associated with each application.

60. Bernet teaches the method of claim 12 or 13 in which an aggregation of information from applications, the extent of aggregation for each application being dependent on an indicator of priority for information exchange associated with each application (Paragraph 0045; application identifier used to identify application type and

establish priority; Paragraph 0047 policy server prioritizes request relative to others). It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Jawanda and Bernet because they both deal with network communications between applications on a client and a server. Furthermore, the teaching of Bernet to make the extent of aggregation for each application be dependent on an indicator of priority for information exchange associated with each application would make allocate finite bandwidth resources based on the importance of the specific traffic involved.

61. Jawanda in view of Bernet fails to teach the method of claim 17 in which the information is an aggregation of information for applications, the extent of aggregation for each application being dependent on an indicator of priority for information exchange associated with each application.

62. Jawanda in view of Bernet and further in view of Westfield and further in view of Tso teaches the method of claim 17 in which the information is an aggregation of information for applications, the extent of aggregation for each application being dependent on an indicator of priority for information exchange associated with each application. The rationale for combining Westfield and Tso with Jawanda is as described for claims 9 and 11 above.

Conclusion

63. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents and publication are cited to further show

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the state of this art with respect to "Method and apparatus for managing concurrent network communication connections"

- i. US 5,812,784 Watson et al.
- ii. US 6,674,713 Berg et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isaac R Clark whose telephone number is (703)605-1237. The examiner can normally be reached on Monday-Friday 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A Follansbee can be reached on (703)305-8498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Irc



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